REMARKS

This Response is responsive to the Final Office Action mailed February 2, 2007 ("Office Action").

Claim Amendments

New claim 37 is introduced with this amendment. Claim 37 is supported by the original specification as filed, specifically Paragraph 00049, and does not introduce new matter.

Claim Rejections – 35 U.S.C. §102(b) or 35 U.S.C. §103(a)

Claims 1-36 stand rejected under 35 U.S.C. §102(b) as anticipated by Stevens 2002/0155329 ("Stevens '329") or, in the alternative, stand rejected under 35 U.S.C. §103(a) as obvious over Stevens '329.

According to the Office Action, the Examiner sees no distinction between the process as described in Stevens '329 at Paragraph 0027 and as recited in the claims of the present invention. Office Action, pp. 2. As previously argued, Paragraph 0049 of the present invention illustrates the distinction between the Stevens '329 and the present invention.

As indicated by the Examiner, at Paragraph 0027 Stevens '329 mentions flowing gas through the bed under conditions in which the calcium carbonate is decomposed and the carbon dioxide is removed. Further, at Paragraph 0027 Stevens '329 mentions that the inventors have used helium, nitrogen, and steam.

In contrast, Paragraph 0049 of the present invention discusses FIG. 3b (a graph illustrating the effect of hydrating a calcinated carbon dioxide fixing material on the efficiencies of reactions occurring within the catalyst bed) as follows: "Calcination was achieved by heating the bed to about 800°C and flowing steam and nitrogen [through] the bed. After the fifteenth reforming/calcination cycle, the calcinated calcium oxide was hydrated by flowing

steam through the bed at 200°C. . . . The results illustrated in FIG. 3b indicate that the functional lifetime of the carbon dioxide fixing material can be significantly increased by hydrating the calcinated carbon dioxide fixing material."

This excerpt illustrates the distinction between the flowing of steam of Stevens '329 and the hydration step of the present invention. Specifically, the present invention includes the step of "hydrating of the calcinated carbon dioxide fixing material" as recited in claim 1. In practice, the temperature of the carbon dioxide bed is allowed to drop below 600°C and then the bed is exposed to steam. This converts a potion of the CaO to CaOH which disrupts the crystal structure of the solid and allows more rapid absorption of CO in the subsequent reforming step. In summary, the present invention is the process of Stevens '329 with an additional added "hydration" step added between the calcination and reforming steps when the carbon dioxide fixing material loses too much surface area to be effective and needs an additional regeneration boost to recover its ability to rapidly absorb CO_2. With respect to the anticipation rejection based on Stevens '329, Stevens '329 does not expressly or inherently disclose the separate hydration step of the present invention. As a result, reconsideration and withdrawal of the rejection of claims 1-36 under §102(b) is respectfully requested.

With respect to the obviousness rejection based on Stevens '329, Stevens '329 does not suggest the separate hydration step of the present invention. As a result, reconsideration and withdrawal of the rejection of claims 1-36 under §103(a) is respectfully requested.

Allowable Subject Matter

The Examiner has indicated that claim 34 would be allowable if rewritten in independent form. In the event the above arguments are not successful to overcome the rejections, Applicants will rewrite claim 34 in independent form.

Applicants extend their gratitude to the Examiner for identifying the allowable subject matter.

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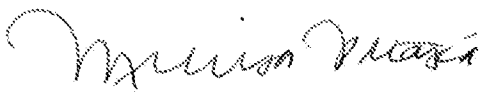
All of the stated grounds of objection and rejection are believed to have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,



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